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PA - (SHIE) SHINETSU CHEM IND CO LTD

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XIC - C08G-064/10 ; C08K-003/22 ; C08K-005/09 ; C08K-005/42 ; C08L-025/04 ; (
C08L-025/04 C08L-083/07) ; (C08L-025/04 C08L-069/00 C08L-083/07) ; (
C08L-025/04 C08L-043/04 C08L-069/00)

AB - J06128434 A flame retardant resin compsn. comprises; 100 pts. wt. of
(A) a thermoplastic styrene resin; 1 to 50 (pref. 5 to 10) pts. wt. of
(B) an organopolysiloxane resin which contains a $\text{CH}_2=\text{CHSiO}_{1.5}$ unit or
 $\text{CH}_2=\text{CH}(\text{CH}_3)\text{SiO}$ unit and has a molecular weight of 500 to 100,000
(pref. 1,000 to 20,000); 0.1 to 20, (pref. 0.2 to 10) pts. wt. of (C)
at least one flame retarder selected from potassium perfluoroalkane
sulphonate, brominated polycarbonate resin and magnesium carboxylate;
and 0 to 200 pts. wt. of (D) a mineral hydroxide.

- Also claimed are compsns. where; (B) has $\text{CH}_2=\text{CHSiO}_{1.5}$ unit or
 $\text{CH}_2=\text{CH}.\text{CH}_3\text{SiO}$ unit and $\text{C}_6\text{H}_5\text{SiO}_{1.5}$ unit; (B) has $\text{CH}_2=\text{CHSiO}_{1.5}$ unit or
 $\text{CH}_2\text{CH}.\text{CH}_3\text{SiO}$ unit and $(\text{C}_6\text{H}_5)_2\text{SiO}_2$ unit; (B) has $\text{CH}_2=\text{CHSiO}_{1.5}$ unit or
 $\text{CH}_2=\text{CH}.\text{CH}_3\text{SiO}$ unit and $\text{C}_6\text{H}_5.\text{CH}_3\text{SiO}$ unit; or (B) has $\text{CH}_2=\text{CHSiO}_{1.5}$ unit
or $\text{CH}_2=\text{CH}.\text{CH}_3\text{SiO}$ unit, SiO_2 unit and $(\text{CH}_3)_3\text{SiO}_{0.5}$ unit.

- Pref. (A) is polystyrene, high-strength polystyrene, butadiene-styrene
copolymer, acrylonitrile-styrene copolymer and
acrylonitrile-butadiene-styrene copolymer. (B) includes a hydrolysate
or chlorosilane or alkoxysilane, an equilibrated product of cyclic
siloxane, etc. The terminal gp. may be silanol, methoxy, ethoxy,
isopropoxy or isobutoxy gp. Pref. (C) is potassium perfluorobutane
sulphonate and magnesium stearate. Pref. (D) is aluminium hydroxide
and magnesium hydroxide.

- ADVANTAGE - The flame retardant resin compsn. has high safety as it
generates no harmful gas and shows reduced dripping on combustion.

- In an example, formulation comprised; 100 pts. wt. of standard grade
polystyrene; 10 pts. wt. of organopolysiloxane resin of formula
 $(\text{C}_6\text{H}_5\text{SiO}_{1.5})_{0.8}(\text{CH}_2=\text{CHSiO}_{1.5})_{0.2}$; 0.5 pt. wt. of potassium
perfluorobutane sulphonate; and 100 pts. wt. of aluminium
hydroxide.(Dwg.0/0)

R 125 04 C08L43/04 C08L58/04

1W - FLAME RETARD RESIN COMPOSITION COMPRISE THERMOPLASTIC POLYSTYRENE
RESIN ORGANO POLYSILOXANE RESIN FLAME RETARD METAL HYDROXIDE REDUCE
HARM GAS DRIP COMBUST

2W - FLAME RETARD RESIN COMPOSITION COMPRISE THERMOPLASTIC POLYSTYRENE
RESIN ORGANO POLYSILOXANE RESIN FLAME RETARD METAL HYDROXIDE REDUCE

HARM GAS DRIP COMBUST

NC - 001

OPD - 1992-10-16

ORD - 1994-05-10

PAW - (SHIE) SHINETSU CHEM IND CO LTD

TI - Flame retardant resin compsn. - comprises thermoplastic styrene]
resin, organo:polysiloxane resin, flame retarder and metal hydroxide
for reduced harmful gas and dripping on combustion